SHORELINES HEARINGS BOARD
STATE OF WASHINGTON

PRESERVE OUR ISLANDS, WASHINGTON ENVIRONMENTAL COUNCIL, AND PEOPLE FOR PUGET SOUND,

Petitioners,

v.

KING COUNTY AND NORTHWEST AGGREGATES,

Respondents.

NORTHWEST AGGREGATES,

Petitioner,

v.

KING COUNTY,

Respondent.

SHB NO. 04-009
SHB NO. 04-010

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER

This matter arises on the shoreline of Maury Island in King County. King County denied Northwest Aggregates' ("Glacier") shoreline permit application to replace an existing but non-functional conveyor and barge loading dock used to export sand and gravel. The Shorelines Hearings Board ("Board") concludes that SEPA review of the project was adequate, that the proposal will not have adverse environmental impacts in violation of SEPA or the Shoreline Management Act ("SMA"), but that absent conditions, the project as proposed could be inconsistent with King County SMP and SMA requirements relating to recreation, noise, and the existing character of the shoreline. The Board reverses King County's denial of the permits and remands the matter to King County for issuance of a Shoreline Substantial Development Permit and Shoreline Conditional Use Permit with conditions as described in this Order.

The Board held a hearing in this matter from August 16 – 25, 2004. The first day of the hearing was held at Vashon High School on Vashon Island, and the remaining days at the Board's hearing room in Lacey. The Board was comprised of Bill Clarke, Presiding, William H. Lynch, Chair, Gordon Crandall, Darcie Nielsen, and Judy Wilson. Board members Nielsen and Wilson listened to recorded proceedings of some portions of the hearing.

Petitioners Preserve Our Islands, Washington Environmental Council, and People for Puget Sound ("POI et al.") were represented by John Arum and Brian Gruber of Ziontz Chestnut Varnell Berley & Slonim, and David Mann of Gendler & Mann. Ralph Palumbo, Polly McNeill, and Phil McCune of Summit Law Group, PLLC, and Michael Sinsky, John Briggs, and Lisa Lawrence of the King County Prosecuting Attorney's Office appeared on behalf of King County. William Cronin and Russell King of Corr Cronin, LLP, and T. Ryan Durkan, Stephen H. Roos, and Howard F. Jensen of Hillis Clark Martin and Peterson, P.S., appeared on behalf of Glacier.

Kim L. Otis, Randi R. Hamilton, and Betty J. Koharski of Gene Barker and Associates, Olympia, Washington, provided court-reporting services. The Board and parties conducted a site visit of the subject property on the morning of the first hearing day. The Board also received sworn testimony of witnesses, exhibits, and argument on behalf of the parties. Having fully considered the record, the Board enters the following:

FINDINGS OF FACT

PROJECT OVERVIEW

[1]

Glacier owns a sand and gravel mine of approximately 235 acres on the Southeast shore of Maury Island, which is connected to Vashon Island. Sand and gravel mining has occurred at

this site since the 1940's by predecessor owners, and recently by Glacier. Glacier now owns the uplands and tidelands in the project area, while the bedlands are state-owned. In 1968, the predecessor owner of the site built a conveyor and barge loading dock for the export of sand and gravel. From 1968 to 1978, the mine, conveyor, and barge loading dock was used to export fill material to various construction projects in King County. The sand and gravel material at the Glacier site is high quality, relatively clean, and has a large proportion of desirable sand. *Testimony of Ron Summers; Allen Hamblen; Ron Teissere, Ex.25, Ex. 162.*

[2]

Glacier operates a number of sand and gravel mines in the Pacific Northwest. The company's site at Steilacoom, also a waterfront site, has been active in recent years. Glacier has leased the Maury Island mine to another mining company in recent years, and that company has conducted a minimal amount of mining for delivery on Vashon and Maury Islands. Glacier now intends to actively operate the Maury Island mine because its Steilacoom site is ending operations. *Testimony of Ron Summers, Ex.62.*

[3]

Between 1968 and 1978, the mine produced up to 2.8 million tons of sand and gravel annually. In recent years, the company leasing the site from Glacier has mined between 10,000 to 20,000 tons of sand and gravel per year. The material has been moved by truck off-site for use on Vashon and Maury Island. If Glacier resumed mining and exported sand and gravel using the barge loading dock, the largest barges used could carry up to 10,000 tons in a single trip. A 4,000 ton barge carries an amount of sand and gravel equal to 115 gravel trucks, so a 10,000 ton barge would replace approximately 287 gravel truck trips. There is a current market demand for

the sand and gravel material off Maury and Vashon Islands. *Testimony of Ron Summers; Ex. 162.*

[4]

In the sand and gravel mining industry, it is common for levels of production to fluctuate over long periods of time. It is also common for aggregate to be transported based on market demand. The cost of transporting sand and gravel is a key determinate in whether a site will be active, as up to 60% of the cost of sand and gravel is due to transportation costs. If Glacier were to actively mine the site, moving the sand and gravel material by truck and then ferry is not a viable transportation alternative. *Testimony of Ron Teissere; Allen Hamblen; Ron Summers; Anthony Gibbons; Ex. 62; Ex. 57.*

[5]

In 1997-1998 when Glacier initiated its proposal, it proposed to mine and barge up to 7.5 million tons per year from the Maury Island site. This level of activity was premised on the site being used for three or four years to provide materials for construction of the Third Runway at Sea-Tac International Airport. It is unlikely at this point that the site would be used to provide materials for Sea-Tac Airport. Based on current demand, the likely annual quantity would be between 1.5 and 2.0 million tons per year. The SEPA review process analyzed environmental impacts based on a range of mining quantities, including 3.1 million tons per year, 5.7 million tons per year, and 7.5 million tons per year. King County's shoreline permit denials were premised only on an annual quantity of 7.5 million tons per year, but not any of the lesser volumes considered in SEPA review. *Testimony of Ron Summers; Stephanie Warden; Ex. 25.*

[6]

As proposed by Glacier, the mining process at the site would use bulldozers in the upland mine area to excavate and push materials to collection feeders that would load material onto a conveyor belt. The conveyor belt would transport materials from the upland mining area to a dock to which barges would be moored and filled with sand and gravel. Tugboats would be used to move barges to and from the dock. The loaded barges would be moved by the tugboats to locations around Puget Sound where material is needed, such as cement plants around Puget Sound operated by Glacier and other companies. *Testimony of Ron Summers. Ex. 25, Ex. 92.*

[7]

Adjacent land uses include Gold Beach residential community approximately ½ mile to the northeast, Sandy Shores residential community approximately ⅓ mile to the southwest, 60 acres of forested land owned by the state, a variety of residential subdivisions and 5-10 acre homesites. In this area, Puget Sound and its shoreline are used for a variety of recreational and aesthetic pursuits, including boating, fishing, SCUBA diving, and bird-watching. While this area of Maury Island formerly had a number of sand and gravel pits, including the Gold Beach and Sandy Shores subdivisions, Glacier's facility is the last one in operation, and it is the only large sand and gravel facility in King County with water access. King County's 2000 FEIS characterized the Gold Beach and Sandy Shores as quiet shoreline communities. Because of the curve of the shoreline inward at the Glacier site, Gold Beach and Sandy Shores are oriented toward Puget Sound, not toward the Glacier site. *Testimony of Maurice Carpenter; Pat Collier; Ex. 25;*

[8]

Barge loading of sand and gravel at the site last occurred in 1978. Since that time, however, Glacier has renewed a number of regulatory requirements for the barge loading dock, including aquatic lands leases from Washington State Department of Natural Resources ("DNR") that relate to the barge loading dock. Glacier also submitted aquatic lands lease applications in 1999 and 2001. In 1991, Glacier commissioned a study of the dock and recommendations for repair and maintenance. In 1992, Glacier conducted repairs to the barge loading dock and sought a shoreline exemption for this work. In 1993, King County issued an after-the-fact shoreline exemption to allow "limited repair and maintenance on an existing extractive industry pier" for repair work already done by Glacier. *Testimony of Ron Summers; Ex. 110, Ex. 111, Ex. 112, Ex. 113, Ex. 114, Ex. 278; Ex. 279; Ex. 280.*

[9]

In spite of the repairs to the barge loading dock, the structure has deteriorated. Significant portions of the wooden superstructure of the dock and mooring dolphins are missing. The dock still supports the frame of the conveyor system, but the conveyor belt has been removed. The electrical components of the conveyor, including the motors and controls, have been removed. In its current condition, the barge loading dock could not be used.

RECENT PERMITTING AND ENVIRONMENTAL REVIEW PROCESS

[10]

In 1998, Glacier began the process to obtain the necessary permits to repair or replace the conveyor and barge loading dock. Glacier applied for a shoreline exemption for proposed repairs to the conveyor and barge loading dock. King County made a SEPA Determination of Significance, requiring an Environmental Impact Statement for the proposal. King County

issued a draft EIS in 1999. King County issued a Final Environmental Impact Statement in June 2000 ("2000 FEIS"). The proposal considered in the 2000 FEIS was to repair the existing conveyor and barge loading dock by replacing the minimum number of wooden piles with steel piles, and to continue replacing wooden piles over time. King County's SEPA review covered the shoreline permits at issue in this appeal, as well as for the upland mining operation that is subject to different permits. *Testimony of Ron Summers; Ex. 25.*

[11]

The 2000 FEIS determined that as initially proposed, the project could have adverse environmental impacts, and included a number of mitigation measure to prevent environmental impacts. Based on the 2000 FEIS mitigation recommendations and input from other natural resource permitting agencies, Glacier modified its project proposal. The 2000 FEIS mitigation measures added to Glacier's proposal included: (1) extending the dock approximately 72 feet further away from shore to create greater distance between tugboats and eelgrass beds at the site, (2) establishing an approach and departure protocol for arriving and departing tugboats and barges, (3) using a haulback system to reposition barges during loading without the use of tugboats, and (4) replacing all wooden piles with steel. *Ex. 91.*

[12]

On May 31, 2002, King County denied Glacier's request for a shoreline exemption, and advised Glacier that a Conditional Use Permit (CUP) and a Shoreline Substantial Development Permit (SSDP) would be required. Glacier appealed the shoreline exemption denial to Snohomish County Superior Court where that appeal is stayed pending resolution of these appeals before the Board. *Ex 46. .*

[13]

In September 2002, Glacier filed applications for a Shoreline Substantial Development Permit and Shoreline Conditional Use Permit with King County. Under Glacier's September 2002 proposal, the dock would be open grated steel with approximately 75 percent open area. The overall gross surface area of the dock would be reduced from the 8,490 square feet of the existing wooden dock to 7,340 square feet. The new conveyor and dock would extend 72 feet further into Puget Sound than the existing wooden dock. The 228 creosote wood piles of the existing dock would be replaced with between 62 and 82 steel piles. The portion of the conveyor extending over the beach and water would be enclosed in a tube called a gallery to prevent spillage of materials, reduce noise and windblown dust, and reduce lighting and glare. A telescoping spout at the end of the conveyor would lower material into the barge and reduce wind blown dust. Seven dolphins, each consisting of four to six steel piles would be used to moor barges. A haul back system using winches and cables would be used to move the barges along the face of the dock as they are loaded. The conveyor and barge loading dock will be gray and green in color to reduce appearance. The existing timber dock, trestle, conveyor, and dolphins would be removed from the site. Except for the area of the shoreline over which the conveyor and barge loading dock extends, the remainder of the approximately 1 mile of waterfront at the site would be undeveloped. *Ex. 47.*

[14]

In November 2002, DNR sought to create several aquatic reserves, including an aquatic reserve along the East shore of Maury Island that could include aquatic lands adjacent to the Glacier facility. Glacier challenged that aquatic reserve designation, and ultimately reached a

settlement agreement with DNR. The status of DNR's Maury Island aquatic reserve is still being considered by DNR. *Ex. 40.*

[15]

Throughout the permitting process, King County, Glacier, and interested citizens and environmental groups, including POI et al., engaged in public comment and discussion regarding Glacier's proposal. Key concerns of the public were the impact to nearshore habitat, including eelgrass beds in the vicinity of the existing barge loading dock, noise, loss of recreational opportunities, and the overall effect of the operation of the conveyor and barge loading dock on the character of the shoreline. *Testimony of Stephanie Warden; Andrew Wones; Pete Stoltz.*

[16]

Glacier, POI et al, citizens, and other interested parties submitted numerous comments and technical documents on Glacier's proposal to King County throughout the permitting and environmental review process. Many of the technical documents submitted by Glacier and POI et al. to King County were critiques of documents submitted by the other party. Glacier submissions included eelgrass surveys conducted in 2001, 2002, and 2003, a 2002 Technical Memorandum on Propeller Wash Modeling, a 2003 Technical Memorandum on Propeller Wash Calculations, the 2003 Propeller Wash Measurements and Model Comparison, the 2003 Technical Memorandum: Response to Review of Technical Memorandum Propeller Wash Model Calculations and Models Comparisons. Comments and technical reports submitted by POI et al. included the 2002 Analysis of Prop Wash, Spillage, and Sediment Transport Impacts of the Maury Island Glacier Northwest Gravel Mine, the 2002 comments on noise impacts, the 2003 Prop Wash and Sediment Resuspension, and a Technical Review of Glacier's Propeller

Wash Model. These documents were also provided to the Board as expert witness testimony or exhibits.

[17]

The modifications to Glacier's proposal since the issuance of the 2000 FEIS triggered preparation of a SEPA Addendum, which King County issued on May 28, 2003 ("2003 FEIS Addendum"). Five days after issuance, King County withdrew the May 28, 2003 SEPA Addendum on the basis that certain public comments regarding Glacier's proposal had been submitted to a King County DDES staff member but were not circulated to other King County DDES staff involved in the SEPA process. King County's Notice of Withdrawal of the EIS Addendum stated that a revised environmental document would be produced by a third-party consultant based on a review of all environmental information to date on the barge loading dock. *Testimony of Stephanie Warden. Ex. 52.*

[18]

In May 2003, Glacier submitted a Draft Mitigation Plan describing measures that will be implemented to mitigate potential impacts from gravel spillage, shading, propeller wash, and noise. In August 2003, Glacier submitted a Barge Approach and Departure Protocol specifying operational procedures for tugboat captains to use while moving the barge to and from the dock. The Barge Protocol establishes angles of entry and exit to prevent tugboat propeller wash from being directed at eelgrass beds at the site. These documents were identified by King County as appropriate mitigation for the conveyor and barge loading dock in the 2000 FEIS. *Ex. 52 Appendices B and D.*

[19]

Glacier's initial shoreline application and relating grading permit application placed the limitation on mining activity at edge of shoreline jurisdiction, 200 feet from the Ordinary High Water Mark. The 2000 FEIS analyzed impacts of mining operations on the bluff along the property. Prior to the release of a revised SEPA Addendum, King County and Glacier met to discuss issues relating to the bluff at the mine site. These discussions resulted in Glacier in February 2004 submitting a revision to its grading permit application so that the boundary of mining activity would be 200 feet from shoreline jurisdiction, or 400 feet from the OHWM at the site. *Exhibit 76; Ex. 304.*

[20]

Due to the volume and complexity of technical information submitted to King County on the issue of propeller wash and eelgrass impacts, and the controversy surrounding the issuance and subsequent withdrawal of the 2003 FEIS Addendum, King County hired a third party consultant, Joe Scott of Tetra Tech, to review the issue. Tetra Tech completed its analysis in November 2003. This analysis concluded that Glacier's JETWASH propeller wash model was more applicable to the site than POI et al.'s Maynord model. However, the JETWASH model showed a velocity of 85 cm/sec at a distance of 100 from the dock face. This velocity was 10 cm/sec higher than a 75 cm/sec eelgrass damage threshold used in a study conducted by Hart Crowser for the Washington State Ferry System in 1997. Based on this, King County sent Glacier a letter on November 26, 2003 requesting additional mitigation, including: (1) Extending the dock face 15 feet further away from shore to increase the distance from the dock face to the North and South eelgrass beds to at least 115 feet, (2) Revision of the Barge Approach and Departure Protocol to include mitigation and monitoring recommendations from

Joe Scott, and (3) A conceptual/contingency plan for engineered or structural approaches to eelgrass protection, and a plan for replanting eelgrass if damage occurs. *Ex. 61; Testimony of Pete Stoltz; Joe Scott.*

[21]

On December 2, 2003, Glacier responded to King County and agreed to the mitigation requests in King County's November 26, 2003 letter. Based on this second dock extension, the face of the dock would now be approximately 120 feet from the North and South eelgrass patches at the site. Glacier also submitted a revised Barge Approach and Departure Protocol. In a December 4, 2003 letter to Glacier, King County acknowledged that Glacier's modifications appeared consistent with the additional mitigation requested by King County, and stated it would be making a decision on additional SEPA review. *Testimony of Joe Scott; Greg Borba; Pete Stoltz; Ex. 61, Ex. 63, Ex. 65/66.*

[22]

King County DDES staff held a number of meetings over the next few months relating to the Glacier project. On March 16, 2004, King County issued a revised SEPA Addendum ("2004 FEIS Addendum"). King County's 2004 FEIS Addendum concluded that Glacier's project, as modified, was not likely to have significant adverse environmental impacts and that Glacier had incorporated mitigation measures into the proposal so there are no new probable significant adverse impacts associated with the proposed conveyor and barge loading dock. King County concluded that the information analyzed in the SEPA Addendum did not trigger the SEPA requirement for preparation of a Supplemental FEIS. *Testimony of Greg Borba; Ex. 52.*

[23]

On March 12, 2004, the Director of King County DDES received a draft shoreline permit decision, that included alternative findings and conclusions, one version supporting issuance of the permits, the other version supporting denials of the permits. On March 16, 2004, King County denied Glacier's SSDP and CUP applications. King County's basis for denial was that the principal use of the project was mining, and that conveyor and barge loading was accessory to the principal use. King County concluded that because the principal use of mining was not water dependent, the project could not be authorized because only water dependent uses are allowed waterward of the Ordinary High Water Mark within the Conservancy Environment of King County's Shoreline Master Program ("KCSMP"). *Testimony of Stephanie Warden; Ex. 82; Ex. 92.*

[24]

The Board previously reversed King County's determination that Glacier's proposal is not a water dependent use in its Summary Judgment decision. King County's decision also determined that Glacier's proposal did not meet the requirements for a nonconforming use, although Glacier was not requested by King County to submit information to establish that a nonconforming use existed. Prior to the denials issued on March 16, 2004, King County had not raised the issue of water dependency as a basis to deny the permit, though POI et al. had done so.

[25]

King County's denial also was based on the conclusion that "Glacier's proposed barge loading facility would provide a level of activity that would rival even an intensive industrial use. Allowing such a use in the protective conservancy environment would be contrary to the King County Shoreline Master Program policies." King County based this conclusion on the

assumption that Glacier would mine and barge a quantity of 7.5 million tons per year, the highest quantity analyzed in the 2000 FEIS. The mining and barging of 7.5 million tons per year was premised on Glacier providing materials for the Third Runway at Sea-Tac International Airport, which was a possibility when the permit process was initiated in 1998. At this point, however, Glacier is not likely to provide fill material to Sea-Tac Airport, and expects immediate annual demand for sand and gravel from the Maury Island site to be between 1.5 and 2.0 million tons. King County's March 16, 2004 did not consider any quantity other than 7.5 million tons per year. *Testimony of Ron Summers; Stephanie Warden; Allen Hamblen; Anthony Gibbons; Ex. 92.*

[26]

In its analysis of the shoreline conditional use permit criteria at KCC 25.32.050, King County determined that Glacier's proposal did not meet criteria 1 (compatible with uses permitted within the designated shoreline environment), but did meet criteria 2 (will cause no unreasonable adverse effects on the shoreline and surrounding properties and uses) and 3 (will promote or not interfere with public use of surface waters). King County concluded that while Glacier's proposal met applicable shoreline Conservancy Environment policies 1, 2, 4, 9, and 10, that the proposed level of activity was contrary to master program policies. King County's denial of the shoreline conditional use permit did not include an analysis of whether the project was compatible with the King County Comprehensive Plan. *Testimony of Stephanie Warden; Ex. 92.*

[27]

Glacier's project also required a permit from the U.S. Army Corps of Engineers ("USACOE"). This federal permit triggers the consultation provisions of the federal Endangered Species Act ("ESA") and Magnuson Act. The USACOE concluded the project, as modified, was not likely to adversely affect certain species, including ESA listed salmon. The USACOE determination then required concurrence by NOAA Fisheries and U.S. Fish & Wildlife Service. On February 10, 2004, NOAA Fisheries issued a letter pursuant to informal consultation under § 7 of the Endangered Species Act and Essential Fish Habitat Consultation under the Magnuson Act. Based on the modifications to the project proposal, NOAA Fisheries concurred with USACOE that the project is not likely to adversely affect threatened Puget Sound Chinook salmon. On April 23, 2004, the U.S. Fish & Wildlife Service also concurred that the project is not likely to adversely affect the listed species under its jurisdiction: bull trout, marbled murrelet, and bald eagle. These consultation processes do not include public comment, but the concurrence letters indicate the federal agency review included information from the King County permitting process that included public comment. *Testimony of Glen Grette; Ex. 54; Ex. 98; Ex. 75.*

[28]

Glacier's proposal also requires a Hydraulic Project Approval from Washington Department of Fish & Wildlife. Glacier representatives met with WDFW in 2000 to discuss permitting issues. WDFW issued an HPA for the project in May 2002 based on November 2001 plans and specifications submitted by Glacier. WDFW issued a second HPA in June 2004 for Glacier's project included changes to extend the conveyor. *Testimony of Pete Stoltz; Ex. 289; Ex. 43; Ex. 102.*

APPEALS TO SHORELINES HEARINGS BOARD

[29]

Glacier filed a petition for review with this Board. POI et al. also filed a petition for review with this Board. The cases were consolidated by Order of the Board.

[30]

The issues before the Board as numbered in the Pre-Hearing Order were as follows:

1. Does the Shorelines Hearings Board have jurisdiction to decide whether King County's decision violates the due process clause of the Washington Constitution and United State Constitution, and if so, does King County's decision violate the due process clause?

2. Whether Preserve Our Islands, Washington Environmental Council, and People for Puget Sound are aggrieved persons with standing to challenge aspects of the County's shoreline permit decision and associated environmental review pursuant to RCW 90.58.180?

3. Whether the petitions of Northwest Aggregates and Preserve Our Islands, Washington Environmental Council, and People for Puget Sound should be dismissed for failure to name an indispensable party: the owner of the bedlands upon which the proposed project would exist?

4. Does the Shorelines Hearings Board have jurisdiction to consider whether the proposed project qualifies for a shoreline permit exemption, and if so, does it qualify?

5. Does the Shorelines Hearings Board have jurisdiction to consider whether Northwest Aggregates can continue to use and operate the barge-loading dock without a shoreline conditional use permit, if so, can it do so?

6. Does the proposed project comply with the Shoreline Management Act, King County Shoreline Master Program, and other applicable law?

   (a) Is the proposed project a prohibited industrial or commercial use under the KCSMP?

   (b) Is the proposed project a water dependent use under the KCSMP and SMA?

   (c) Does the proposed project meet the requirements for a nonconforming use in the KCSMP?

   (d) Does the proposed project meet the requirements in the SMA, KCSMP, and under other applicable law for a conditional use permit?

(e) Does the proposed project meet the requirements in the SMA, KCSMP, and under other application law for a shoreline substantial development permit?

7. Was SEPA review of the proposed project adequate?

(a) Does King County's June 2000 Final Environmental Impact Statement (FEIS) and March 2004 EIS Addendum adequately address the full environmental impacts of the proposed project, including but not limited to the effects of propeller wash, noise, or effects on feeder bluffs?

(b) Was King County required under SEPA to prepare a Supplemental EIS (SEIS) to address new information on environmental impacts of the proposed project?

[31]

The parties filed cross-motions for summary judgment and/or motions to dismiss on issues 1, 2, 3, 4, 5, and 6(a), (b), and (c). The Board granted summary judgment and/or dismissal on these issues except 6(c). The Board determined as follows:

- The Board was without jurisdiction to hear constitutional issues (Issue 1);

- POI et al. had standing to pursue the appeal (Issue 2);

- The petitions for review of POI et al. and Glacier should not be dismissed for failure to serve the State of Washington as owner of the bedlands on which the proposed barge loading dock would exist (Issue 3);

- The Board had jurisdiction to consider whether the project qualified for a shoreline exemption (Issue 4);

- The Board lacked jurisdiction to determine whether Glacier can continue to use and operate the barge-loading dock without a shoreline permit (Issue 5);

- The proposed project is not a prohibited industrial or commercial use under the KCSMP (Issue 6(a)); and

- The proposed project at issue was the integrated conveyor and barge loading dock, which was a water dependent use under the King County Shoreline Master Program and Shoreline Management Act, and therefore was an authorized use within the Conservancy Environment of the King County SMP. (Issue 6(b)).

See *Order Granting and Denying Motions to Dismiss and for Partial Summary Judgment*.

[32]

Prior to the hearing on the merits, Glacier withdrew issue number 4, concerning whether or not the project qualified for a shoreline exemption.

[33]

Based on the summary judgment decision and Glacier's withdrawal of issue 4, the issues before the Board during the hearing were as follows:

1. Was SEPA review of the proposed project adequate?

   (a) Does King County's June 2000 Final Environmental Impact Statement (FEIS) and March 2004 EIS Addendum adequately address the full environmental impacts of the proposed project, including but not limited to the effects of propeller wash, noise, or effects on feeder bluffs?

   (b) Was King County required under SEPA to prepare a Supplemental EIS (SEIS) to address new information on environmental impacts of the proposed project?

2. Does the proposed project comply with the Shoreline Management Act, King County Shoreline Master Program, and other applicable law?

   (a) Does the proposed project meet the requirements for a nonconforming use in the KCSMP?

   (b) Does the proposed project meet the requirements in the SMA, KCSMP, and under other applicable law for a conditional use permit?

Does the proposed project meet the requirements in the SMA, KCSMP, and under other application law for a shoreline substantial development permit?

[34]

The Board held an eight-day hearing. Testimony of expert witnesses was pre-filed with the Board, and then expert witnesses appeared at hearing to affirm their testimony, provide additional testimony, and be subject to cross-examination. Lay witnesses appeared at the hearing but did not file pre-file testimony.

PROPELLER WASH AND EELGRASS

[35]

Tugboats would move barges to and from the barge loading dock. Tugboat propellers can create significant underwater turbulence strong enough to displace eelgrass plants or aquatic sediments in which eelgrass plants are rooted. Eelgrass provides important underwater habitat for a variety of marine species in Puget Sound, including herring and salmon. Patches of eelgrass are of great environmental value. Individual eelgrass plants or shoots have less environmental value, and may exist sporadically or temporary due to factors limiting survival. In general, four characteristics determine whether or not eelgrass will exist in an area: depth, slope, substrate, and current velocities. In Puget Sound, eelgrass exists at depths between –4 and –12 to – 16 feet Mean Low Lower Water. Below these depths, light penetration is usually insufficient for photosynthesis to occur and thus eelgrass cannot survive. Eelgrass will grow on underwater slopes up to a slope of about 30 percent. Eelgrass requires substrate consisting of sediment, rather than rock, in which to grow roots. *Testimony of Ronald Phillips; Glen Grette; Jon Sloan; Ex. 307.*

[36]

Between January 1998 and July 2003, at least eight eelgrass surveys were conducted at the Glacier site. Different firms and individuals conducted the surveys, and used different methodologies, thus direct comparison of the surveys is not meaningful. In all of these surveys, however, two main eelgrass patches were identified, one North of the existing dock, and one South. Beginning in 2001, Glacier standardized the methodology used in the eelgrass surveys, including using an underwater grid to demarcate the extent of eelgrass patches. Glacier subsequently used this methodology in surveys conducted in 2002, 2003, and 2004. Earlier surveys, including ones conducted by Jones & Stokes and MRC in 1999, located individual

eelgrass shoots or plants and a small eelgrass patch North of the dock in addition to the main North and South eelgrass patches. These eelgrass shoots were located in various locations around the site. The individual shoots and small eelgrass patch were not located in later eelgrass surveys. Based on the underwater characteristics at the site, the North and South eelgrass patches exist in the two areas that have the necessary characteristics for eelgrass growth. The sporadic existence of eelgrass in other areas of the site is consistent with evidence that the depth, slope, and substrate in areas other than the North and South eelgrass patches are not generally suitable for eelgrass growth. *Testimony of Pete Stoltz; Ronald Phillips; Glen Grette; Jon Sloan.*

[37]

Eelgrass can be impacted by lack of light caused by overhead shading. The redesign of the conveyor and barge loading dock includes features to avoid shading the North and South eelgrass patches. The extension of the dock away from the eelgrass patches and the use of metal grating that allows more light penetration than a wood dock will prevent shading from negatively impacting the eelgrass beds. Analysis of shading impacts to eelgrass confirms that under Glacier's proposal, lighting conditions for eelgrass will likely improve over existing conditions. *Ex. 91.*

[38]

Significant environmental analysis of propeller wash impacts to eelgrass occurred during the SEPA and shoreline permitting process and in testimony before the Board. Potential eelgrass impacts from propeller wash can include the scouring of bottom sediments, the uprooting of eelgrass plants, suspended sediments, or shading caused by air bubbles or turbidity. The key

contention between the parties on propeller wash was the velocity of propeller wash that would be generated by tugboats at the site, and what eelgrass impacts would result.

[39]

The 2000 FEIS did not include data gathering or modeling of propeller wash velocities or impacts to eelgrass at the Glacier site. The 2000 FEIS concluded that as originally proposed, propeller wash may cause considerable damage to eelgrass beds if propeller wash was oriented directly at the beds. The 2000 FEIS also concluded that suspended sediment caused by propeller wash was unlikely to impact eelgrass beds, and that shading from bubbles and suspended sediment could impact one of the eelgrass beds if tugboats were used to reposition barges while they were being loaded. To avoid these impacts to the eelgrass beds, Glacier modified its proposal to include mitigation measures in the 2000 FEIS, including: (1) extending the dock approximately 72 feet further away from shore to create greater distance between tugboats and eelgrass beds at the site, (2) establishing an approach and departure protocol for arriving and departing tugboats and barges, (3) using a haulback system so that barges could be repositioned during loading without the use of tugboats, and (4) replacing all wooden piles with steel. The modifications to Glacier's proposal, and the development of the Barge Approach and Departure Protocol and Mitigation Plan are based on the mitigation recommendation in the 2000 FEIS.

PROPELLER WASH MODELLING

[40]

A number of the technical documents submitted to King County by Glacier and POI et al. during the permitting and environmental review process related to modeling of propeller wash.

Tetra Tech, the third party consultant hired by King County to review the various propeller wash models and critiques, concluded that overall, the JETWASH propeller wash model used by Glacier's consultants Pacific International Engineering and Coast & Harbor Engineering was more appropriate for the conditions at the Glacier site on Maury Island. Tetra Tech concluded that the Maynord model used by POI et al. was not appropriate to simulate the conditions at the Maury Island dock. King County adopted Tetra Tech's conclusions on propeller wash modeling in the 2004 FEIS Addendum. *Ex. 52, Appendix B.; Testimony of Joe Scott; Pete Stoltz; Greg Borba.*

[41]

Glacier's JETWASH model was used to simulate the "worst-case" near-bottom propeller wash velocity at a distance of 100 feet between the propeller and leading eelgrass bed edge. Glacier's JETWASH model estimated a bottom velocity of 40 cm/sec at both the North and South eelgrass beds. Glacier's JETWASH model was recalibrated after a simulation using the tugboat Westrac at the site, and the model estimated a velocity of 85 cm/sec at a distance of 100 feet. Glacier's JETWASH model is based on the assumption that the force of the propeller or "jet" is a "free jet," unbounded or not impacted by intersection with the seabed or surface of the water body. Tetra Tech concluded that while this assumption is not supported by current available literature, this assumption did not invalidate Glacier's JETWASH model because while "the jet is compressed where it intersects the seabed, thus the water velocity in the jet is expected to increase; however, the friction between the water jet and the sediment is anticipated to increase, thereby slowing the water at the interface. It is not know (sic) which phenomenon dominates." *Ex. 52, Appendix B.*

[42]

In contrast to Glacier's JETWASH model, POI et al's Maynord model includes the changes in propeller wash velocity caused by interaction with the seabed and water surface. However, POI et al's Maynord model was calibrated based on conditions specific to the Mississippi River, including use of inland towboats different from those that would be used at Glacier's Maury Island site, and calibration based on the flat-bottomed seafloor of the Mississippi, not the sloping seafloor at the Maury Island site. King County's third party consultant Tetra Tech concluded "the Maynord model is judged to be the wrong model to use for assessing the effect of the propeller wash at the Maury Island gravel dock." *Testimony of Joe Scott, Ex. 52, Appendix B.*

[43]

Glacier's JETWASH model has been used to analyze propeller wash impacts at ferry terminals throughout Puget Sound. A 1997 study propeller wash by Hart Crowser for the Washington State Ferry System determined that current speeds above 75 cm/sec began to erode the sediment at the edge of eelgrass patches, and that current speeds above 110 cm/sec resulted in more extensive damage, though such velocities did not completely erode the eelgrass patch. These velocities were tested in the controlled environment of a flume study that has a laminar flow (constrained by a solid boundary), which is different than the behavior of propeller wash in the natural environment. The report also noted that in favorable substrate, eelgrass patches in Puget Sound can survive velocities up to 200 cm/sec. Ultimately, Hart Crowser used a velocity of 50 cm/sec as a conservative threshold for eelgrass impacts. *Ex. 175.*

[44]

Based on these findings, Hart Crowser recommended a setback of 100 feet between the ferry propeller and eelgrass beds to avoid impacts. Glacier produced a technical memo regarding the distance between the dock and eelgrass beds necessary to keep propeller wash velocity at or below 50 cm/sec, though this memo was not presented to King County during the SEPA or permitting process. *Ex. 175; Ex. 300; Testimony of Pete Stoltz.*

[45]

Propeller wash modeling is part of the developing technical field of fluid dynamics, and applying even the most recent advances in engineering and modeling, none of the models advanced by either party are perfect. This is due largely to the challenge of trying to duplicate actual impacts at the Glacier site based on technical data gathered in controlled flume studies or at different sites where propeller wash was studied or modeled. Tetra Tech's review of the competing propeller wash models prefers the JETWASH model developed by Glacier, though notes that the model does have some flaws. Specifically, the Glacier model did not adequately address the interaction of the propeller wash with the seabed, and that data of the Glacier model shows too much variation or scatter to assess impacts precisely. *Ex. 295; Testimony of Vladimir Shepsis; Joe Scott; David Hill.*

[46]

But in addition to uncertainties associated with the JETWASH model identified in the 2004 FEIS Addendum, other uncertainties of propeller wash modeling show that impacts to eelgrass may be less than expected. The Glacier JETWASH model is based on conditions at 0 Mean Lower Low Water (MLLW), while the mean higher high tide is 11.66 feet MLLW. Consequently, JETWASH predicts a higher velocity than what would likely occur 96% of the

time, because actual water depth will generally be higher than that used in the model 96% of the time, and predicts a lower velocity 4% of time, during the lowest of low tides. In other words, operations during the lowest 4% of minus tides could result in higher propeller wash velocities and thus eelgrass damage not predicted by the JETWASH model. *Testimony of Vladimir Shepsis, Ex. 295*

[47]

In addition, two features that would lessen propeller wash impacts at the site were not considered in either model. First, propeller wash would not flow directly toward the eelgrass beds because the Barge Approach and Departure Protocol proposed by Glacier would direct propeller wash parallel to shore, rather than back toward shore and the eelgrass beds. There were no calculations of how propeller wash velocities would differ when flow was directly at an eelgrass bed compared to when the direction of flow was along shore.

Second, the flow of propeller wash would be impacted by the presence of the barge in two ways. The barge would be located in between the tugboat and dock and thus would make the tugboat even further way from the North and South eelgrass beds than the 120 foot minimum. Further, the loaded barges would ride lower in the water, and act as a barrier disrupting propeller wash flow. These two physical realities in the site are not disputed, but the extent to which they would lessen propeller wash impacts was not studied or modeled and are unknown. These uncertainties, however, could only result in decreasing propeller wash impacts, not increasing them. Thus, the velocities predicted by the preferred JETWASH model are likely higher than would exist. *Testimony of Pete Stoltz; Joe Scott*

[48]

In addition to the 72-foot and 20-foot extensions moving the conveyor and barge loading dock away from shore to provide a margin of safety in protecting the North and South eelgrass beds, Glacier's Barge Approach and Departure Protocol, Appendix D to King County's 2004 FEIS Addendum ("Barge Protocol") provides standards for operating tugboats to prevent eelgrass damage. The Barge Protocol includes specific locations on barges where tugboats would push or pull the barges, and directional requirements for arriving and departing from the dock at certain angles so that propeller wash would not be directed at either the North or South eelgrass beds. Following the Barge Protocol, propeller wash would be directed parallel to shore, rather than back toward shore and eelgrass beds. The Barge Protocol would be provided to transport companies working at the barge loading dock, and conditions of tugboat operation would also be posted at the dock. The Barge Protocol also has monitoring and reporting provisions if deviations from the Barge Protocol occur, as such deviations could result in damage to the North or South eelgrass beds. *Testimony of Pete Stoltz.*

[49]

Glacier's proposed Mitigation Plan, Appendix B to King County's 2004 EIS Addendum, is intended to provide ongoing monitoring of impacts to eelgrass and a process to recognize and respond to any eelgrass impacts. Monitoring efforts include monitoring the velocity of propeller wash when tugboats are in operation, using grids to track the location of eelgrass, diver surveys, audits of barge loading operations to ensure the Protocol is being followed, and preparation of an annual Monitoring and Operations Report. *Ex. 52.*

[50]

Under Glacier's proposed monitoring plan, a third-party consultant would place current meters on the seaward edge of the North and South eelgrass patches. The current meters would be hard wired to a recording station located on the barge loading dock. The consultant would operate the current meters for an initial period of the lesser of 6 months or until 50 barges had been loaded at the site. Current velocity measurements would be recorded so data could be compared to the arrival and departure of tugboats and barges. The velocity meter data logger would collect velocity measurements at least 2 times per second, which would then be averaged over 5 second periods. If no 5 second mean velocities attributable to tugboat propeller wash above 50 cm/sec are observed during the initial monitoring period of 6 months or 50 barge loads, propeller wash velocity recording would cease. If 5 second mean velocities between 50 cm/sec and 75 cm/sec are observed during initial monitoring period, then the monitoring period would be extended for 6 months. If 5 second mean velocities over 75 cm/sec are observed during the initial monitoring period, then a multidisciplinary group would be convened to review operations and information and provide recommendations on how to reduce velocities to an acceptable level. If 5 second mean velocities over 100 cm/sec are observed, then barge loading operations would cease immediately, and the multidisciplinary group would be convened. The multidisciplinary group would determine what operational or engineering controls are necessary to protect the North and South eelgrass bed. The monitoring plan also includes an overriding condition that

> "if at any time eelgrass monitoring results indicate that propeller wash from tugboats impacted eelgrass, all barge loading operations will cease until additional controls can be identified, tested, and reviewed in coordination with regulatory agencies to ensure that any further impacts to eelgrass will be avoided before barge loading will be allowed resume."

The mitigation plan does not define the standard of impact to eelgrass that would be used as a threshold for additional protective measures. *Ex. 52.*

[51]

POI et al. questioned the use of 5 second averaging in Glacier's proposed monitoring plan on the basis that the average may not reflect the highest velocity that could cause eelgrass damage. POI et al. also criticized the premise underlying the Protocol and Monitoring Plan, which would rely on either voluntary compliance by Glacier or enforcement by King County or the Washington Department of Ecology. *See Ex. 264.*

[52]

Based on the results of Tetra Tech's analysis of the rival propeller wash models and impact analysis, and on Glacier's modification of its proposal to include mitigation measures called for in the 2000 FEIS, King County's 2004 FEIS Addendum concluded that Glacier's conveyor and barge loading dock would have no probable significant adverse environmental impacts on eelgrass beds at the site. *Ex. 259; Ex. 52.*

NOISE IMPACTS

[53]

The operation of Glacier's proposed barge-loading dock would have several onsite sound sources, including bulldozers or loaders used to mine material, a loader to load material into hoppers feeding the conveyor belt, operation of the conveyor, barge loading, and tug boat operation. Noise impacts are a critical issue, given the existing character of the shoreline, the proximity of the Gold Beach and Sandy Shores subdivisions, and the ease with which sound can

travel over water. King County analyzed noise associated with Glacier's proposed conveyor and barge-loading dock by using the established noise limits in the King County code as an indicator of the significance of noise impacts. King County's noise ordinance is not part of the King County SMP, and does not apply to the operation of vessels. The standard applied to the Glacier operation was the industrial noise standard, even though industrial uses are not allowed in the Conservancy Environment under the King County SMA. The noise analysis also did not include consideration of how relative changes in noise from the project would impact enjoyment of the shoreline environment or uses. Compliance with the King County noise ordinance occurs so long as the applicable noise level is not exceeded more than 25% of an hour, or 15 minutes. *Testimony of Ioana Park; Testimony of Kristen Wallace.*

[54]

The 2000 FEIS includes a number of mitigation measures to minimize noise impacts, including construction of berms to provide a barrier between equipment and nearby residences, maintenance of equipment to prevent squeaking noises, lowering sand and gravel into barges using a telescoping end rather than dumping material from a fixed height, enclosing the conveyor in a tube or gallery, and using lights rather than audible alarms. The 2000 FEIS concluded that neighbors would hear the project and some would find it annoying, but that project noise is not expected to significantly affect the use of property, sleep or repose, or the quality of the environment. The 2000 FEIS also concluded that while the project would generally comply with the sound limits in King County's noise ordinances, that during later mining phases, noise from barge-loading operations could exceed the King County noise standards at some residential locations under certain wind or atmospheric conditions. The 2000 FEIS concluded that noise

exceedances are more likely to occur from 11:00 p.m. to 5:00 a.m. Ex. 25; *Testimony of Ioana Park; Testimony of Kristen Wallace.*

[55]

The noise analysis in King County's 2000 FEIS was based in part on a noise analysis submitted by acoustic engineers at McCulley Frick & Gilman ("MFG"), who also provided expert testimony at the hearing. The MFG analysis used sound measurements of the operation of Glacier's DuPont mining site, and existing noise levels at sites in the Gold Beach and Sandy Shores subdivisions to the North and South of the Glacier Maury Island site to create a sound model predicting noise impacts from the operation under a variety of operating conditions. The MFG analysis found no exceedances of the King County noise ordinance levels. MFG also produced a supplemental analysis based on Glacier's change in the project to extend the dock further from shore, and to include the noise from an idling tugboat. This analysis found that operations in phase 5 and 6 of the project during a 2 meter per second wind would exceed the King County noise standard by 1 decibel (dBA) at Gold Beach receptor 7. Background noise levels at Gold Beach and Sandy Shores may be 4 – 6 dBA lower than those used in the 2000 FEIS. *Testimony of Kristen Wallace; Testimony of Ioana Park.*

MARINE MAMMAL IMPACTS

[56]

The 2000 FEIS and 2004 EIS Addendum did not include an analysis of marine mammal impacts, and no public comments raising such concerns were submitted to King County during the permitting or environmental review process. Within Puget Sound, the current population of

orca whales is less than its historical population, perhaps as little as 5 – 10%. The causes of this decline include chemical impacts such as PCB's, decline in salmon, the orcas' prey base, and human disturbance. Certain orca pods summer in the San Juan and Gulf Islands and then move into Central Puget Sound during the fall months as salmon return to natal rivers. Orca pods in the San Juan Islands have exhibited behavioral differences such as more frequent surfacing and curved or zig-zagged movement when followed closely by whale-watching boats. Marine mammals could also be impacted by underwater noise. It is unclear what level of project noise or how many tugboat trips per day would affect marine mammals, whether tugboat traffic would induce similar behavioral responses to whale-watching boats, or whether the project would create a physical or acoustic barrier to marine mammal movement. The impact to orca whales could be anywhere from .1 to .8 whales, though such impacts are attributable to up to 40 barge loads per day. *Testimony of David Bain, Andrew Wones.*

[57]

FEEDER BLUFF IMPACTS

Under Glacier's original proposal, no mining would occur within shoreline jurisdiction. King County's 2000 FEIS concluded that removal of upper portions of the bluffs outside shoreline jurisdiction through mining would increase slope stability by removing portions of the bluff and eliminating the periodic surface sloughing of material. The 2000 FEIS also concluded that sloughing events caused by wave action will continue with or without mining activity. These types of sloughing events contribute material to the shoreline and beach. *Ex. 25.*

[58]

Though the 2000 FEIS did not identify any adverse environmental impacts to the bluffs, King County staff expressed concern in 2003-2004 over the project's impact on the feeder bluffs at the site. Prior to the release of a revised 2004 SEPA Addendum, King County and Glacier met to discuss issues relating to the bluff at the mine site. These discussions resulted in Glacier submitting a revision to its grading permit application so the boundary of the mining activity would be 200 feet from shoreline jurisdiction, or a total of 400 feet from the OHWM at the site. No technical analysis of the impacts resulting from moving the mining operation 200 feet further back from the shoreline was requested by King County or submitted by Glacier. *Testimony of Ron Summers; Ex. 76.*

[59]

At the project site, the top of the slope is between 250 and 350 feet above the shoreline. The average slope from the shoreline to the top of the slope down to the shoreline ranges from 34 to 40 degrees. The variation in the steepness of the slope is both natural and due to previous mining activity at the site. Soil moves down the slope toward the shoreline due to three main causes: (1) Soil creep, from gravity acting upon soil disturbed by precipitation, expansion and contraction, root growth, groundwater, or animal movement; (2) Shallow instability, the movement of thin sheets of saturated or/and steep soil; and (3) Seismic instability. At the toe of the slope, repeated wave action removes soil accumulation and then redistributes soil along the beach. The movement of soil at the site is at equilibrium: the movement of soil down the slopes, and the movement of soil away from the toe of the slope, are generally equal. *Testimony of Bill LaPrade; Ed Heavey.*

[60]

Witnesses presented different opinions on soil movement at the site, on predicted impacts on the feeder bluff, and the appropriate time frames for purposes of analysis. Ed Heavey, an engineer with Landau Associates, testified that seismic instability was a major source of soil movement at the site, and used a computer model to determine how much of the slope would be lost to a slide by earthquakes of different sizes or recurrence intervals. Heavey concluded that an earthquake with an average recurrence interval of 475 years has a high probability of causing regression of the bluffs into the interior of the gravel mine, thus diminishing the supply of soil available to replenish the shoreline. Heavey also concluded that seismic activity could result in significant loss of soil at the site. Based on on-site investigation, Bill LaPrade of Shannon & Wilson determined that the 2001 Nisqually earthquake resulted in downslope movement of approximately 5 to 10 feet and that little further movement has occurred since then. The continual effects of soil creep and shallow sliding have played a larger role in soil movement than seismic events. Heavey recommended a 2,000 to 4,000 year time horizon be used for purposes of analyzing slope stability issues and related impacts on feeder bluffs, while LaPrade testified that a 100 year timeframe is sufficient. *Testimony of Bill LaPrade; Ed Heavey.*

RECREATION IMPACTS

[61]

The project area is used for a variety of recreational activities. These activities include motorized boating, kayaking, canoeing, beach walking, bird and wildlife viewing, and SCUBA diving. Residents of the Gold Beach and Sandy Shores subdivisions to the North and South frequently use the site. Glacier owns the beach and tidelands at the site, but has allowed access through the site for recreational purposes. Glacier intends to continue allowing public access to

the beach area, and would also place signage to restrict access to the conveyor, barge loading dock, and mining area. *Testimony of Pat Collier; Maurice Carpenter; Ron Summers.*

[62]

The Cascadia Marine Trail, a popular route for kayakers in Puget Sound, runs along the shore of Maury Island past the project area. The nearshore route close to Maury and Vashon Island is important to non-motorized boaters, due to the high number of vessels in the East Passage of Puget Sound near the site. The site is also used by SCUBA divers, and is a popular destination for commercial dive charter businesses. Compared to other areas in Central Puget Sound, the area has certain characteristics that make it popular for SCUBA diving, including moderate underwater currents, visibility, depth, and sunken barges at the site providing underwater reef habitat for marine life. *Testimony of Reed Waite; Dayna Rodgers; Ex. 25.*

[63]

There is concern that operation of the conveyor and barge loading dock would eliminate recreational uses at the site. Kayakers, canoeists, and SCUBA divers would not use the area during operations due to safety issues. The 2000 FEIS concluded "[d]iving opportunities along the shoreline at the site would be essentially eliminated during active mining periods. Approximately 90% of such recreational activity occurs on weekends. Commercial SCUBA diving charters often plan in advance to visit specific sites in Central Puget Sound, but also will use backup sites depending on conditions and the level of diver expertise. *Testimony of Lisa Jaguzny, Pete Stoltz.*

NON CONFORMING USE and DOCK VALUATION

[64]

In the permitting process before King County, Glacier did not seek authorization to repair or replace the conveyor and barge loading dock on the basis it was a legal non-conforming use. Nonetheless, King County's denial of Glacier's permit applications concluded that the conveyor and barge loading dock could not be repaired or replaced under the non-conforming use provision of the King County SMP. King County's decision stated the basis for this decision was that Glacier had not provided adequate information and had the burden to prove legal non-conformity. At hearing, DDES Director Stephanie Warden testified that Glacier's proposed conveyor and barge loading dock replacement could not be authorized as a legal non-conforming use because it would result in increasing both the quantity of sand and gravel mined at the site and duration of time over which sand and gravel would be mined and barged off Maury Island. *Testimony of Stephanie Warden.*

[65]

In its decision on summary judgment, the Board determined that Glacier's proposed conveyor and barge loading dock was a water dependent use authorized as a permitted use within the Conservancy Designation of the King County SMP. Even though the Board concluded the conveyor and barge loading dock was a permitted water dependent use, the Board heard testimony and argument on the non-conforming use issue for purposes of issuing a decision on all issues in the appeal. Under King County's SMP, the non-conforming use issue implicates the cost of repair or replacement of the conveyor and barge loading dock and evaluation of its fair market value at present.

[66]

Testimony was provided regarding the valuation of the existing conveyor and barge loading dock and the cost of replacement as they relate to King County's ordinance on non-conforming shoreline uses, which concerns the fair market value of the nonconforming use or development. The witnesses relied on previous reports from firms Reid Middleton, Echelon Engineering, Symonds, and General Construction, site visits, and their own expertise.

[67]

In 2001, Craig Overly of Overly & Associates provided Glacier with two estimates for repair and replacement of the conveyor and barge loading dock. The first estimate was a repair estimate, using timber piles and timber decking, similar to the original construction. This estimates totaled $2,128,000 including both construction and permitting costs. The second 2001 estimate was based on new construction, using concrete and steel to replace timber materials. The new construction or replacement estimate totaled $4,598,000 including both construction and permitting costs. *Testimony of Craig Overly.*

[68]

Since Overly provided Glacier these estimates in 2001, the modifications in Glacier's proposal have resulted in changes in project construction cost. Overly updated his 2001 cost estimates for dock repair to $2,400,000, and for replacement to a steel and concrete structure to $4,749,100 in 2004. Overly's 2004 cost estimates did not include permitting costs and fees, which he estimated in 2001 to be $1,000,000. *Testimony of Craig Overly.*

[69]

King County's expert witness, Jeffrey Layton of Layton & Sell, provided an estimate to repair/replace the dock as it existed in 1968, regardless of current environmental permit

conditions or building code requirements. Layton estimated the 2004 replacement/reproduction cost to be $3,876,445, and the reconstruction cost to be $3,384,520. Layton used Overly's cost estimates for some of his work. Layton's estimates include a number of cost items not included by Overly. These include mobilization and demobilization charges, sales tax on a variety of services, safety improvements, conveyor dust covers, onshore conveyor, replacement of all dolphins, barge haulback winches, higher design engineering and contingency amounts, and replacement of more pier structure. When adjusted to reflect costs included by Overly, Layton's cost estimate for dock repair was $2,720,535. *Testimony of Jeffrey Layton; Craig Overly.*

[70]

Expert witnesses provided testimony on the fair market value of the conveyor and barge loading dock for purposes of determining whether repair or replacement of the conveyor and barge loading dock would be allowed under the non-conforming use provision of the King County SMP. Glacier's witness David Drebin used the cost approach, a recognized appraisal method, to establish a value of the pier in its present condition of $7,100,000. This value is composed of three component figures: land value - $2,100,000; depreciated improvement cost - $2,400,000; and entrepreneurship - $2,600,000. *Testimony of David Drebin.*

[71]

Drebin's appraisal included valuation of land because under standard appraisal practice, improvements such as the conveyor and barge loading dock don't exist in isolation, but rather, as a part of the underlying land. Drebin determined that 50 acres, or about 20% of the larger parcel of 235 acres, was the minimum amount of land that could support an economic sand and gravel operation, the highest and best use for the property. Drebin selected 50 acres based on

observations of the sizes of other sand and gravel sites around Puget Sound. Drebin testified that if only 5 or 10 acres of land were used, that the conveyor, barge loading dock, and mine could not be operational. *Testimony of David Drebin.*

[72]

Glacier's other expert appraiser, Anthony Gibbons, used the income approach with the larger parcel theory, also an accepted appraisal method. Under this method, Gibbons considered the amount the absence of the conveyor and barge loading dock would detract from the value of the whole property. Gibbons methodology valued the use of the conveyor and barge loading dock, not the cost of the conveyor and barge loading dock in the absence of any use. *Testimony of Anthony Gibbons.*

[73]

Gibbons' income approach was based on a royalty rate of $1 per ton that Glacier could expect to receive. This resulted in an appraisal of the conveyor and barge loading dock of between $20 - $25 million. As applied to Glacier's site, the income approach used by Gibbons does not give a value to the business enterprise, but rather, to the real estate value based on the mining royalty. Gibbons' methodology results in attributing the entire value of the mine site to the conveyor and barge loading dock, assuming the conveyor and dock could be put to use. Neither Glacier appraisal believed that DNR aquatic lands lease issues were implicated in the non-conforming use fair market value determination. *Testimony of Anthony Gibbons; David Drebin.*

[74]

King County's expert appraiser Jeffrey Sherwood used the cost approach, also used by Glacier appraiser David Drebin. Sherwood determined that the non-conforming use provision pertains solely to the improvements on the land, and thus unlike Drebin and Gibbons, did not attribute any value to the land at the Glacier site. Sherwood did so because he felt the conveyor and barge loading dock had no income stream attributable to itself, because any income stream would be due to the mine, not the conveyor and barge loading dock. *Testimony of Jeffrey Sherwood.*

[75]

Sherwood also testified that comparisons to other marine loading facilities, like those at public ports, could not be made. Based on Jeffrey Layton's cost estimates, Sherwood determined the fair market value of the conveyor and barge loading dock, had it been maintained would be $3,470,000. Sherwood concluded that because the dock was not currently usable, that it had no value or perhaps even a negative value based on the costs that could be required to remove the remaining portions of the conveyor and barge loading dock. *Testimony of Jeffrey Sherwood.*

[76]

Any Conclusion of Law deemed to be a Finding of Fact is hereby adopted as such.

FROM THE ABOVE FINDINGS OF FACT, THE BOARD MAKES THESE

CONCLUSIONS OF LAW

[1]

The Board has jurisdiction over the subject matter and the parties. RCW 90.58.180. The party appealing a specific issue in King County's permit decision has the burden of proof on that

issue. RCW 90.58.140(7). The Board's review of shoreline decisions is de novo, without deference to the decision of the local government. WAC 461-08-500(1). *McArthur v. City of Long Beach*, SHB Case No. 03-017 (2003), see also *Buechel v. Ecology*, 125 Wn.2d 196, 203 (1994).

SCOPE OF BOARD REVIEW OF PROPOSAL

[2]

The permit denials and associated environmental review appealed to the Board relate to the replacement of the conveyor and barge loading dock. The mining activity that will provide sand and gravel to the conveyor and barge loading dock is outside shoreline jurisdiction, and therefore is not subject to shoreline permitting authority. However, the environmental review of the project, and the testimony and evidence before the Board, focused on activities that will occur both within and outside of shoreline jurisdiction. For example, the impact of the project on the feeder bluff at the site, Glacier's decision to move the mining boundary 200' further from the shoreline, and POI et al.'s claim that even with the additional 200' setback, that the project would impact beach nourishment and/or be at risk of slope failure all involve environmental impacts that are in part, outside shoreline jurisdiction. While the permits at issue in these appeals do not regulate mining activity *per se*, the issues raised on the adequacy of environmental review and compliance with the King County SMP and SMA have by their nature implicated consideration of shoreline and non-shoreline impacts. This reinforces the Board's determination in its summary judgment decision that the project or principal use at issue is the integrated project of the sand and gravel mine, including the conveyor and barge loading dock. In addition, the Board's Order relates to the operation of the conveyor and barge loading dock, consistent

with its authority under the SMA, but does not directly regulate the tugboats used with the conveyor and barge loading. The effect of the conditions on tugboats is incidental to the regulation of the conveyor and barge loading dock.

ADEQUACY OF SEPA REVIEW

[3]

The determination of whether a SEPA EIS is adequate is a question of law. *Leschi v. State of Washington,* 84 Wn.2d 271*; OPAL v. Adams County,* 128 Wn.2d 869, 875 (1996); *Barrie v. Kitsap County,* 93 Wn.2d 843 (1980). In reviewing the adequacy of an EIS, two important rules apply: First, a rule of reason or reasonableness is applied. *Klickitat County Citizens Against Imported Waste v. Klickitat County* [CITE]. Second, SEPA provides that the decision of an agency regarding adequacy of an EIS is to be "accorded substantial weight." RCW 43.21C.090;. *Dukich v. Pend Orielle County*, SHB No. 98-005 (1998).

To be considered adequate, an EIS must present the agency decisionmaker with a "reasonably thorough discussion of the significant aspects of the probable environmental consequences" of the agency's decision. *Cheney v. Mountlake Terrace*, 87 Wn.2d 338, 344-45 (1976); *Des Moines v. Puget Sound Regional Council*, 108 Wn.App. 836, 849 (1999). Significant aspects are those that a reasonable likelihood of more than a moderate adverse impact on environmental quality. *Norway Hill Preservation & Protection Association v. King County*, 87 Wn.2d 267, 274 (1976).

The Board concludes SEPA review in this case was adequate. The 2000 FEIS identified potential impacts. Glacier modified the project to prevent or mitigate these impacts. Public comments, included specialized technical input, were received and reviewed by King County.

King County took the additional step of hiring a third party consultant with specialized expertise to review disputed models and mitigation measures. The extended period of environmental review resulted in a comprehensive analysis of potential project impacts and mitigation measures. Where uncertainty exists, the project includes a margin of safety to protect against adverse impacts, and ongoing monitoring to ensure impacts do not occur.

FEIS ADDENDUM OR SUPPLEMENT

[4]

POI et al. asserts that King County erred in issuing a SEPA Addendum in 2004, rather than requiring a Supplemental FEIS. A supplemental FEIS is required only if there are substantial changes to a proposal so it is likely to have significant adverse impacts, or if new information demonstrates a probable significant adverse impact that was not covered by the "range of alternatives and impacts analyzed in the existing environmental documents." WAC 197-11-600(3)(b). In determining whether there are any new probable significant impacts, the agency may consider any additional mitigation measures that an applicant will implement. WAC 197-11-330(1)(b). This Board has previously stated that the standard of review is whether a local government's decision to issue an EIS Addendum was "clearly erroneous in view of the entire record and the public policy contained in SEPA." *Skywest v. City of Duvall,* SHB NO. 98-37 (1999). A finding is clearly erroneous when, even though there is evidence to support the decision, the board is left with the definite and firm conviction that a mistake has been made. *Klineburger v. City of Bothell*, SHB No. 99-026, citing *Norway Hill* 87 Wn.2d 267, 274 (1976).

The changes in the project after issuance of the 2000 FEIS neither made it likely that the project would have significant adverse impacts, nor resulted in new information outside the range of alternatives and impacts analyzed in the 2000 FEIS. Rather, modifications to the design and operation of the project would result in mitigation of environmental impacts, and such modifications were contemplated in the 2000 FEIS. Thus, an FEIS Supplement was not required.

MARINE MAMMAL IMPACTS

[5]

The Board concludes that there is not a reasonable likelihood of adverse impacts to marine mammals from the project, and that such impacts are remote and speculative. SEPA review was not inadequate because marine mammal impacts were not discussed, because elements of the environment that are not significantly affected need not be discussed. WAC 197-11-440(6)(a). Testimony on this issue was based largely on observations of orca whale responses to nearby whale watching boats in the San Juan Islands. No evidence was presented that the barges and tugboats used at the site would have similar movements or impacts on marine mammals.

[6]

Both the existing dock and the proposed replacement dock are a mere fraction of the width of Puget Sound's East Vashon Island passage and there is no evidence that either could impede marine mammal movement. The increase in vessel traffic attributable to the conveyor and barge loading dock and associated tug traffic is minimal compared to existing levels of

vessel traffic in Central Puget Sound. It is possible that use of barges from this site could cause a reduction in overall vessel traffic, as sand and gravel from this site would be barged a shorter distance than other replacement sites. Further, there is not a likelihood that noise from barge loading would impact marine mammals. The range of population impacts of between .1 and .8 orca whales based on between 2 and 40 barge trips per day seems highly speculative, and the middle and high ends of this range are beyond what could be attributed to this project.

SLOPE IMPACTS

[7]

The analysis of slope and feeder bluff impacts in the 2000 FEIS relates largely to the impacts of the mining activity, which is not directly subject to regulation under the King County SMP and SMA because the mining activity occurs outside shoreline jurisdiction. King County's 2000 FEIS concluded that the project's impact on the slope or bluff at the site would not have any significant adverse environmental impacts to the beach or shoreline. After issuance of the 2000 FEIS, King County staff nonetheless indicated concerns about slope and shoreline impacts caused when mining activity intersected the bluff. In response, Glacier agreed to move the mining boundary 200 feet further landward, so it would be between 400 and 600 feet from the Ordinary High Water Mark. Testimony before the Board indicated the project will neither deprive the shoreline or beach of soil or other materials, or cause slope failure over the next 100 years. While a longer period of analysis was proposed, there was no legal or technical basis why slope issues should be analyzed for a period from between 475 years to up to 2,000 to 4,000 years, and this proposal included incorrect factual conclusions about the role of seismic action soil movement down the slope. The Board concludes the conveyor and barge loading dock will

not have adverse impacts on the feeder bluff, and that review of slope impact was sufficient under SEPA.

[8]

Moving the mining boundary 200' further landward also ensures compliance with the King County SMP and SMA. Specifically, moving the mining boundary inland ensures compliance with maintaining the existing character of the shoreline, a policy of the Conservancy Environment in the King County SMP, and maintaining the slope also acts as noise buffer.

[9]

Glacier's revision to move mining activity 200' further landward was not accompanied by and did not result in the development of any permit language or conditions such as use of signage, flagging, or a conservation easement to protect the bluff area. King County's 2004 FEIS Addendum stated "If the grading permit were to be approved, DDES could condition the grading permit to ensure long-term protection of this bluff." The Board agrees condition language is necessary to protect the bluff area. The Board, however, does not have jurisdiction over King County's grading permit authority and cannot rely on that process to provide compliance with the King County SMP and SMA. The Board thus requires permanent protection of the bluff by Glacier as part of this Order.

[10]

PROPELLER WASH MODELING

Claims raised by POI et al. regarding the adequacy of environmental review and mitigation of impacts relating to propeller wash are not supported by the evidence. King County obtained third party independent review of the propeller wash models developed by Glacier and

by POI et al. King County concluded that while neither model was perfect, the JETWASH model used by Glacier was more applicable to the site. The JETWASH model is preferable also because it is applicable to the sloping sea floor found at Maury Island, whereas POI et al.'s model is based on the flat bottom of the Mississippi River. Both Glacier's and POI et al's model raise technical issues. POI et al.'s relies on the doubling of velocities based on two propellers, a proposition for which there is no clear authority, while Glacier's JETWASH does not account for the existence of a boundary. Overall, however, SEPA review related to propeller wash modeling was adequate.

EELGRASS IMPACTS

[11]

Testimony shows that much of the site is unsuitable for eelgrass population. Individual shoots of eelgrass have appeared in different locations from year to year, but have not persisted because of natural conditions relating to depth, slope, current, or substrate. Thus, King County's environmental review properly focused on the North and South eelgrass patches. Because of the uncertainty associated with the propeller wash modeling, Glacier's proposal also includes a number of changes and operational provisions to provide a margin of safety for the eelgrass patches.

Glacier extended the dock so tugboat propellers will be at least 120' away from the nearest eelgrass patch plus the width of the barge, and developed the Barge Approach and Departure Protocol, and Mitigation Plan. While the Hart Crowser study used an impacts threshold of 50 cm/sec, lower than Glacier's 75 cm/sec threshold, the Hart Crowser study is

based on propeller flow directly at eelgrass. This is not the case under the Barge Approach and Departure Protocol.

[12]

Glacier's modifications to the conveyor and barge loading dock design, and development of the Barge Protocol and Monitoring were key factors in the WDFW's issuance of an HPA for the project, and also for the conclusions by NOAA Fisheries and the US Fish and Wildlife Service that the project would not affect listed species or habitat. This is strong evidence that the project modifications and operational guidance developed by Glacier will prevent eelgrass damage. Glacier's mitigation, both in modifying the project, and in establishing operational procedures, overcomes the uncertainty of the propeller wash models. Consistent with these findings by the fisheries agencies, the Board concludes that Glacier's proposal will not have significant adverse impacts on eelgrass, or species that rely on eelgrass including herring and salmon.

[13]

Though significant effort has gone into development of operational procedures and monitoring to prevent eelgrass impacts, the Board believes additional work may be needed to develop meaningful condition language. The Barge Approach and Departure Protocol and Mitigation Plan provide a meaningful foundation for permit conditions, or could be incorporated by reference permit conditions as done by WDFW in the HPA for the project. The Board provides specific direction on conditions relating to eelgrass protection and monitoring in its Order.

NOISE ISSUES

[14]

The Board is not making a determination of whether the project complies with King County's noise ordinance or is consistent with EPA's Region X Noise Guidelines. Rather, the issue before the Board is whether project noise impacts comply with the King County SMP and the SMA. Thus, while comparisons of project noise to King County's noise ordinance and King County's classification of the Glacier site as an industrial noise source but nearby residences as rural receivers is relevant, neither are dispositive. Rather, the issue before the Board is whether SEPA review of noise was adequate, and whether project noise complies with the King County SMP and SMA.

[15]

The Board concludes that SEPA review of noise impacts was adequate. Noise analysis and modeling was based on sound levels produced at a comparable barging facility, sound levels at existing receiver locations near the Glacier site, and relied on a sound model. Noise analysis was revisited after Glacier agreed to extend the dock further, and this information was included in the SEPA process. However, the adequacy of noise analysis under SEPA and whether the noise impacts of a project complies with a shoreline master program and SMA are different questions. SEPA review does not preclude environmental review under different statutory schemes, and should not be used as a substitute for other land use planning and environmental requirements. See *Bellevue Farm Owners Association v. Shorelines Hearings Board*, 100 Wn.App. 341, 354-355 (2000).

[16]

The Board does not have jurisdiction to interpret or determine compliance with the King County noise ordinance. However, the Board can consider the ordinance as part of analyzing whether project noise complies with the King County SMP and SMA. Applying the industrial noise standard from King County's noise ordinance to a project in a shoreline environment where industrial uses are not allowed is indicative of the type of activity in question. While the regulation of the mining activity is not before the Board, the operation of the conveyor and barge loading dock are part of the operation that while not an industrial use under the King County SMP, could have noise impacts similar to industrial uses.

[17]

POI et al. have met their burden that project noise could be inconsistent with the King County SMP and SMA. Under the King County SMP regulations and policies, "[c]onservancy areas are intended to maintain their existing character." KCC 25.24.010; King County SMP policies at 20. RCW 90.58.020 requires "in implementation of this policy the public's opportunity to enjoy the physical and aesthetic qualities of natural shorelines of the state shall be preserved to the greatest extent feasible consistent with the overall best interest of the state and the people generally." It is undisputed that nearby residents will be able to hear the operation of the conveyor and barge loading dock and tugboats. Two receiver sites in Gold Beach would have noise levels exceeding the King County noise standard during the nighttime under a 2 meter/second wind. The FEIS concluded that noise exceedances are more likely to occur from 11:00 p.m. to 5:00 a.m. Protecting noise levels during certain times is necessary to maintain the existing character of the shoreline as required by the King County SMP, and to protect the

aesthetic qualities of the shoreline as required by the SMA. Consequently, the Board will require restricted hours of operation as part of its Order.

RECREATION

[18]

SEPA review of recreation impacts was adequate. Like the Board's analysis of noise impacts, the adequacy of SEPA review of recreation impacts and whether a project complies with the SMA based on recreation impact are different matters. The Board concludes that POI et al. has met its burden of proof that the project could impact recreation at the site in a manner inconsistent with the requirements of the King County SMA and SMP. The Board's conclusion regarding recreation impacts, and the role of the hours of operation condition to ensure compatibility of the project with the recreation provisions of the King County SMP and SMA, is included in its analysis of shoreline conditional use permit requirements.

SHORELINE CONDITIONAL USE PERMIT REQUIREMENTS

[19]

The requirements for a Shoreline Conditional Use Permit under the King County Master Program are at KCC 25.32.050. Shoreline Conditional Use Permits are also subject to WAC 173-27-160, and the policies of the SMA at RCW 90.58.020.

COMPLIANCE WITH KING COUNTY SMP

In its summary judgment decision, the Board ruled that sand and gravel mining is a permitted use within the Conservancy Environment, but because mining is not expressly

authorized, the project is a conditional use. Consequently, the conveyor and barge loading dock must also meet the four requirements for a shoreline conditional use permit at KCC 25.32.050. The requirements for a shorelines conditional use permit, and the Board's conclusions for each of the requirements, are as follows:

1. **The development must be compatible with uses which are permitted within the master program environment in which the development is proposed.**

The relevant permitted uses within the Conservancy Environment of the King County SMP are recreation and residential.

RECREATION

Consideration of and compatibility with recreational use of the area is required not only because recreation is an authorized use with the Conservancy Environment, but due to other shoreline permit requirements as well. Recreation is also a factor in shoreline Conditional Use Permit criterion 3, which prohibits interference with public use of surface waters, and the policies of the SMA, which include public access and recreational opportunities in and around shoreline areas. Finally, the King County SMP encourages recreational activities within the Conservancy Environment. *KCSMP Policies at 20.*

[20]

The Glacier site is used for a variety of recreational activities, including diving, boating, fishing, beach walking, and wildlife and bird-watching. The 2000 FEIS concluded that aquatic recreational uses around the project area would be eliminated during active barge operations. Testimony at hearing showed that the proposal could eliminate or impair recreation at certain

times. Evidence showed that most recreational activity occurs during the summer and on weekends.

[21]

Even though the 2000 FEIS concluded that barge loading would essentially eliminate recreational activity at the site, King County concluded "no interference with public use of the surface waters would be expected as a consequence of this proposal." The Board disagrees with King County's conclusion on this issue. The complete termination of recreational activity cannot be reconciled with King County's conclusion that the project would not interfere with public use of surface waters. However, the hours of operation condition imposed by the Board protects against significant adverse impacts to recreation and public use of surface waters.

RESIDENTIAL DEVELOPMENT

[22]

Residential development is also an authorized use within the Conservancy Environment with which operation of the conveyor and barge loading dock must be compatible. KCC 25.24.090. The evidence showed that concerns from residents of the Gold Beach and Sandy Shores subdivisions included loss of recreational opportunity, noise, and aesthetic impacts from the conveyor and barge loading dock. As conditioned in this decision, the operation of the conveyor and barge loading dock is compatible with residential uses in the area. One outcome of the hours of operation condition imposed in this decision is that annual volumes of mining and barging at the site will be comparable to site operations that existed when barge loading occurred in the 1960's and 1970's. In addition, the conveyor and barge loading dock includes features to

reduce noise, improve aesthetics, prevent environmental impacts, and allow recreational access at the site. As discussed previously, as conditioned by the Board, the conveyor and barge loading dock are compatible with these uses.

KING COUNTY COMPREHENSIVE PLAN

[23]

Consideration of the King County Comprehensive Plan is based on WAC 173-27-160(1)(c), which requires that shoreline conditional use permits be compatible with uses not only in the local SMP, but also "under the comprehensive plan" of the local government. This relationship is also part of the Growth Management Act.

RCW 36.70A.480 states

> "the goals and policies of a shoreline master program for a county or city approved under chapter 90.58 RCW shall be considered an element of the county or city's comprehensive plan. All other portions of the shoreline master program for a county or city adopted under chapter 90.58 RCW, including use regulation, shall be considered a part of the county's or city's development regulations.

The site is zoned mineral under the King County Comprehensive Plan, and was designated as a mineral land of long-term commercial significance pursuant to RCW 36.70A.170 and WAC 365-190-070. These designations are consistent with the authorized uses in the shoreline Conservancy Environment, which include mining.

[24]

2. The use will cause no unreasonable adverse effects on the shoreline or surrounding properties and uses.

King County concluded, and the Board agrees, that the phrases "unreasonable adverse effects" as used in the master program and "significant adverse environmental impacts" in SEPA mean substantially the same thing. As previously discussed, SEPA review of impacts to the shoreline, aquatic habitat, and surrounding properties of uses was thorough and adequate. The Board also agrees with King County that "no unreasonable adverse effects on the shoreline or surrounding properties are therefore likely to result from the proposed barge facility improvements and operations."

[25]

The conveyor and barge loading dock will intersect the shoreline at only a single location, leaving the majority of the shoreline untouched. This is consistent with Mining Policies in the King County SMP, which recognize that "many of the valuable deposits of sand and gravel are located on the marine shorelines" but that "[c]onsumptive and extractive industries should allow the natural shoreline systems to function with a minimum of disruption during their operations and should return the site to as near natural a state as possible upon their completion. King County SMP Policies at 31. Glacier's proposal satisfies both these policies.

[26]

3. The use will promote or not interfere with public use of surface waters.

The Board concludes that based on the hours of operation limitation proposed by Glacier, and as further modified by the Board's Order, the conveyor and barge loading dock will not interfere with public use of surface waters. Specifically, recreational and aesthetic values associated with the site that depend on public use of surface waters will be protected.

[27]

4. The development of the site will not be contrary to the policies of the master program.

Applicable policies in the King County SMP include policies related to mining, docks, and the policies in the Conservancy Environment. As conditioned by the Board's Order, the conveyor and barge loading dock will be consistent with the policies in the master program.

As noted in the Board's decision on summary judgment, the Conservancy Environment is the only designation within King County's master program in which mining is not prohibited. Operation of the conveyor and barge loading dock is consistent with the King County SMP mining policies, which are (1) Mining in unique and fragile areas should not be allowed (removal of mining area to 400 feet from Ordinary High Water Mark); (2) Mining should allow the natural shoreline systems to function with a minimum of disruption during their operation (No mining occurs in shoreline area; function of feeder bluff and aquatic lands preserved; Glacier property includes nearly a mile of natural shoreline); and (3) Mining in or under the waters of shorelines of the state in King County should be discouraged (no mining in or under water would occur). *King County SMP Policies at 30-31.*

The King County SMP policies for piers include ensuring "minimal damage to aquatic resources," preventing "conflicts with recreational boaters . . . and other recreational water activities," and allowing piers only after consideration of effect of the structure on "wildlife and aquatic life, . . . scenic and aesthetic values, . . . recreational and commercial boating." *King County SMP Policies at 42-43.* As conditioned, the proposal complies with these policies.

[28]

Applicable King County SMP policies for the Conservancy Environment include encouraging "diverse recreational activities compatible with the Conservancy Environment," (Policy 3) discouraging "development which would be a hazard to public health and safety or materially interfere with the natural processes," (Policy 4) and regulating development to minimize "erosion and sedimentation, the adverse impact on aquatic habitats and substantial degradation of the existing character of the Conservancy Environment." (Policy 9) King County SMP Conservancy Environment Policies, at 20-21. With the exception of the "existing character" reference in Conservancy Environment Policy 9, King County determined the proposal was consistent with master program policies. As discussed in relation to environmental impacts of the project and recreation, the project is consistent with these policies.

[29]

At present, the "existing character" of the shoreline includes a natural shoreline and bluff, and an existing unusable conveyor and barge loading dock. The natural shoreline and bluff will remain under Glacier's proposal, and aquatic habitat impacts have been mitigated. In 1978, when King County adopted its SMP policy of regulating development to minimize "substantial degradation of the existing character" of the Conservancy Environment, the character of the shoreline at that time included an operational conveyor and barge loading dock moving up to 2.8 million tons of sand and gravel. Under the hours of operation condition, the existing character of the shoreline, shoreline uses, and level of barge loading activity are similar to the character of the shoreline when the conveyor and barge loading dock was used in the 1960's and 1970s'.

COMPLIANCE WITH POLICIES OF SHORELINE MANAGEMENT ACT

[30]

Section 2 of the SMA, RCW 90.58.020, provides the policies with which all shoreline developments must comply. This section provides preferences for certain types of uses and specific alterations to natural shorelines, and includes statements of policy on shoreline use and management. The enumerated policies of the SMA are that proposals (1) promote recognized statewide interests, (2) preserve the natural character of the shoreline, (3) result in long term rather than short term benefit, (4) protect the resource and ecology of the shoreline, (5) increase public access to public owned areas of the shorelines, (6) increase recreational opportunities to the public. As discussed above, these SMA policies are met. The SMA states that "the interest of all of the people shall be paramount in the management of shorelines of statewide significance," and that "permitted uses in the shorelines of the state shall be designed and conducted in a manner to minimize, insofar as practical, any resultant damage to the ecology and environment of the shoreline area and any interference with the public use of the water." Glacier's project, as conditioned by the Board, complies with these policy objectives.

HOURS OF OPERATION CONDITION

[31]

Based on the Board's findings and conclusions, hours of operation conditions are necessary for the project to comply with the King County SMP and SMA. Specifically, the Board concludes that conditions relating to hours of operation of the conveyor and barge loading dock are necessary so (1) the project is compatible with recreation uses near the site, as required

by the King County SMP and SMA, (2) the project maintains the existing character of the Conservancy Environment as required by the King County SMP, and (3) project noise and aesthetics comply with the King County SMP and policies of the SMA.

[32]

In its closing argument, Glacier proposed a condition to limit operation of the conveyor and barge loading from 6:00 a.m. Saturday until 8:00 p.m., while allowing the Director of DDES to authorize weekend loading when needed for public projects. Thus, each week would provide a period of 38 consecutive hours over the weekend where conveyor and barge loading operations would not occur absent an exception from King County. The Board concludes that Glacier's proposed weekend limitation is not sufficient for the use of the conveyor and barge loading dock to be fully compatible with the shoreline environment policies and uses as envisioned by the King County SMP and SMA.

[33]

The hours of operation condition required by the Board is based on Alternative 2 of the 2000 FEIS, while also restricting operation of the conveyor and barge loading dock on weekends as proposed by Glacier in its closing argument. Thus, the Board provides a condition that hours of operation of the conveyor and barge loading dock will be from Monday to Friday, 7 a.m. to 7 p.m. and that King County develop a process for exceptions to these operating hours when necessary.

[34]

The reduction in hours of operation is consistent with the reduction in expected annual mining volumes since the permit process began in 1998. The 2000 FEIS analyzed annual volumes of 7.5 million tons per year, 5.72 million per year, and 3.12 million tons per year. King County's denial of Glacier's permits focused only on 7.5 million tons per year, the highest annual volume that was premised on the site providing material for the Third Runway at Sea-Tac Airport. However, the site is not likely to provide material for Sea-Tac Airport, and would likely produce between 1.5 million to 2.0 million tons per year. Alternative 2 of the 2000 FEIS, with 72 hours of conveyor and barge loading operation per week (7 a.m. to 7 p.m. Monday to Saturday) correlated to an annual volume of 3.12 million tons. The Board's condition removing Saturday barging reduces the 72 hours of weekly barging by 12 hours, or approximately 17%. A 17% reduction in the 3.12 million tons annually under 2000 FEIS Alternative 2 results in an annual quantity of 2.6 million tons. The hours of operation condition allows for annual mining and barging roughly equal to the range of likely production of the site while ensuring compliance with the King County SMP and SMA provisions on existing character, noise, recreation, and aesthetics.

NON-CONFORMING USE

King County determined that the conveyor and barge loading dock could not be repaired or replaced as a non-conforming use under King County's SMP, even though Glacier did not seek to replace the dock on this basis. King County's non-conforming use analysis is based on King County's conclusion that because the principal use of the site is the mine, and the mine is not water dependent, the conveyor and barge loading dock are non-conforming uses. The Board

reversed this conclusion, finding that the project consists of the mine, conveyor, and barge loading dock, a water dependent use under the King County SMP and SMA. The Board believes the conveyor and barge loading dock are authorized permitted uses, not nonconforming uses, but enters Findings of Fact and Conclusions of Law on this issue solely for the purpose of providing a complete decision on all issues raised in the appeal. The Board's findings and conclusions on this issue relate to the fair market value at present of the conveyor and barge loading dock under the shoreline non-conforming use provision of the King County SMP, not to the business value of the property.

[35]

BURDEN OF PROOF

In the shoreline permitting process, Glacier did not seek, and was not informed by King County that it should seek to repair or replace of the conveyor and barge loading dock based on the shoreline nonconforming use statute. Had Glacier done so, it would have had the burden of proof. In its review of this issue, the Board follows the line of cases that **"**[t]he initial burden of proving the existence of a nonconforming use is on the land user making the assertion." *City of University Place v. McGuire*, 144 Wn.2d 640, 647 (2001), citing *Van Sant v. City of Everett*, 69 Wn.App 641, 647-648 (1993).

[36]

King County determined that no intent to abandon the mining use or conveyor and barge loading dock at the site has been demonstrated. The Board concludes likewise, that there has been no intent by Glacier or its predecessors to abandon the conveyor and barge loading dock. King County and POI et al. had the burden of proving abandonment and did not do so. To the

contrary, Glacier has taken steps to repair the dock after it was damaged by fire in 1992, and then five years later initiated the permitting process that is the subject of this appeal. Glacier has also sought to maintain DNR leases to state owned aquatic lands and has participated in the DNR-Maury Island Aquatic Reserve Designation process in order to preserve its ability to use the conveyor and barge loading dock. POI et al's argument that Glacier "does not retain any legal right" in the state-owned aquatic lands and therefore cannot qualify as a non-conforming use is misplaced. In *McGuire,* the Court held that the issue of whether a party claiming non-conforming rights retains legal rights to the use is a consideration only if an intent to abandon the use is also evident. *McGuire*, 144 Wn.2d at 652 (2001). There is no intent to abandon in this case, thus the status of Glacier's DNR leases is not dispositive.

[37]

In McGuire, the Washington Supreme Court recognized the doctrine of diminishing asset, concluding that "[t]he proper scope of a lawful nonconforming use in an exhaustible resource is the whole parcel of land owned and intended to be used by the owner at the time the zoning ordinance was promulgated." *McGuire*, 144 Wn.2d at 651. Here, however, **t**he issue of nonconformity would apply only to the conveyor and barge loading dock, not to the mining operation itself.

[38]

KCC 25.32.060, the non-conforming use statute in the King County SMP reads as follows:

> A. Applications for substantial development or building permits to modify a nonconforming use or development may be approved only if:

1. The modifications will make the use or development less nonconforming; or

2. The modifications will not make the use more nonconforming.

B. A use or development, not conforming to existing regulations, which is destroyed, deteriorated, or damaged by more than fifty percent of its fair market value at present or at the time of its destruction, by fire, explosion or other casualty or act of God, may be reconstructed only insofar as it is consistent with existing regulations.

C. The review of applications for the modification of a non-conforming use shall be subject to the guidelines enumerated in K.C.C. 21A.32 (General Provisions – Nonconformance, Temporary Uses, and Reuse of Facilities).

Glacier argues that subsection A. of this section does not apply in a nonconforming use analysis, because the proposal is not to "modify," the conveyor or barge loading dock. Rather, Glacier asserts only subsection B. applies. The Board disagrees. The ordinance is somewhat unclear in that subsection A. refers to modifications, subsection B. to reconstruction, and then subjection C. to modification again. Construing KCC 25.32.060 as a whole, all subsections apply. Further, Glacier's proposal involves both modification and reconstruction.

[39]

KCC 25.32.060(A) – LESS NONCONFORMING/MORE CONFORMING

King County based its conclusion that the conveyor and barge loading facility would be more nonconforming on the premise that up to 7.5 million tons per year could be barged, and that repair or replacement of the conveyor and barge loading dock would result in a longer useful life of the structures. Testimony indicated that market demand would be between 1.5 and 2.0 million tons, the decrease being largely due to the site not providing material for the Third Runway at Sea-Tac Airport. These conclusions were in error.

[40]

This Board has previously held that an increase in the amount of usage of a nonconforming structure does not increase the nonconformity of the use. *Gambriell v. Mason County*, SHB NO. 91-26 (1992). Even if an objective measure using the quantity sand and gravel loaded through the conveyor and barge loading dock was used to determine an increase in nonconformity, the relevant analysis would be to compare quantities of historical barge loading against likely future barge loading. Testimony showed the 7.5 million tons per year quantity in the 2000 FEIS used by King County in its nonconforming use analysis was at least twice what the actual quantity of sand and gravel barging would be. The likely level of barging based on both market demand and the Board's hours of operation condition will be roughly equal to the level of barging that occurred in the 1960's and 1970's. More specifically, the level of barging in 1978, when the conveyor and barge loading dock would have become nonconforming upon adoption of the King County SMP, was approximately 2.8 million tons annually, and up to 795,000 tons in a single month. That period of time is the appropriate baseline for the nonconforming analysis. As such, Glacier's replacement of the conveyor and barge loading dock is neither an expansion or intensification of barging, and cases regarding expansion or intensification of nonconforming uses are not relevant. In addition, no authority was provided to support King County's theory that Glacier's conveyor and barge loading dock repairs could be denied nonconforming use status because such repairs would extend the life of the structures.

KCC 25.32.060(B) – 50% TEST

[41]

This part of the King County SMP nonconforming use ordinance means that a legal nonconforming use can be reconstructed without complying with existing shoreline regulations if

the cost of repair or replacement is less than 50% of its fair market value. This provision was added to the King County SMP in 1981. During the adoption process, the King County Council's Planning and Community Development Committee produced a summary of the 1981 SMP amendments explaining the basis for the shoreline amendments. The explanation associated with the shoreline non-conforming use provision states as follows:

> "The 50% rule, as proposed, would apply to an entire 'use or development,' rather than to a building – thereby avoiding hardship to a use or development within which a single building is destroyed."

This contemporaneous legislative history is conclusive evidence that the proper measure of "fair market value at present" under KCC 25.32.060(B) is the value of the non-conforming use or structure in terms of value to the whole, or the amount its absence would detract from the value of the whole. This interpretation is consistent with the valuation of the dock prepared by Glacier's appraisers David Drebin and Anthony Gibbons, and with a leading authority on valuation. The Appraisal of Real Estate, 12th Edition, at page 40, states " . . . the value of a component is measured in terms of its contribution to the value of the whole property or as the amount that its absence would detract from the value of the whole." King County appraiser Jeffrey Sherwood did not consider the value of the dock in light of its value to the whole or even a portion of the property, which directly conflicts with the purpose and intent of the shoreline non-conforming use ordinance adopted by King County in 1981.

[42]

The cost of repairing the existing wood dock structure with similar materials was approximately $2.4 million based on Glacier's estimates, and as high as $3,876,445 using King County's estimate. The King County estimate includes a number of inappropriate costs,

including dust covers, upland conveyor repairs, sales tax, and administrative costs. Adjusting King County's cost estimates downward to eliminate the inappropriate cost charges, King County's estimate of repairs to the wooden dock would be $2,720,000.

[43]

The Drebin appraisal included 50 acres of the mine as the minimum amount of land necessary for a viable operation. The Gibbons appraisal included the entire mine site, as the conveyor and barge loading dock contribute to the value of the entire property. Under either scenario, the cost of repairing the dock is less than 50% of the fair market value at present, and thus the conveyor and barge loading dock could be replaced as a nonconforming use. The Board notes that the actual replacement costs will be higher than the $2.4 million cost of repairing the wood dock, because the actual replacement dock differs from the original wood dock. The replacement dock includes a number of aspects that differ in design and cost from the original dock. The appropriate comparison, however, is the cost to repair or reconstruct the dock as it originally existed, not costs of a dock design modified to comply with heightened environmental requirements. Under either of these costs to repair the wooden dock, the project complies with the 50% test and could be reconstructed as a nonconforming use.

[44]

The Board acknowledges the unique circumstances in this permitting process and appeal. King County determined during the permitting and environmental review process that the project could be conditioned to adequately mitigate environmental impacts. While King County at hearing noted certain issues that could be studied further, the Board concludes that King

County's environmental review process under SEPA is adequate and complete, and the Board affirms King County on issues relating to the adequacy of SEPA review. However, because King County denied the permit on other grounds, King County did not develop permit language or mitigating conditions to comply with the King County SMP, SMA, or its SEPA process. Thus, the design level details of conveyor and barge loading construction, monitoring, and mitigation efforts have not been finalized. However, the Board believes the additional construction, monitoring, and mitigation requirements requested by King County during the permitting and environmental review process, and the documents developed by Glacier to meet those requirements, are the appropriate basis for design level detail.

[45]

Any Finding of Fact deemed to be a Conclusion of Law is hereby adopted as such.

BASED ON THE FOREGOING FINDINGS OF FACT AND CONCLUSIONS OF LAW, THE BOARD ENTERS THE FOLLOWING:

ORDER

King County's denials of a Shoreline Substantial Development Permit and Shoreline Conditional Use Permit are REVERSED. The matter is remanded to King County to issue a Substantial Development Permit and Shoreline Conditional Use Permit with the following conditions:

1. Hours of operation. The hours of operation of the conveyor and barge loading dock shall be limited to 7 a.m. to 7 p.m., Monday through Friday. King County may develop reasonable exceptions authorizing operation of the conveyor and barge loading dock during other time periods.

2. Barge Approach and Departure Protocol. Compliance with the December 2, 2003 Barge Approach and Departure Protocol shall be a condition of the permit. King County may either develop shoreline permit condition language not inconsistent with this document, or incorporate the document by reference.

3. Diver Inspection. Section 4 of the Barge Approach and Departure Protocol on Propeller Wash Monitoring shall be modified to include diver inspection of the North and South eelgrass beds after the first 25 barge loads.

4. Propeller Wash Measurements. King County, in coordination with other permitting agencies, will determine whether the use of 5 second averaging of current velocity measurement as detailed in Glacier's December 2, 2003 Barge Approach and Departure Protocol is appropriate, or whether measurement without averaging is necessary to accurately determine impacts to eelgrass.

5. Mitigation Plan. Compliance with the June 2, 2004 Mitigation Plan shall be a condition of the permit. King County may either develop shoreline permit condition language not inconsistent with this document, or incorporate the document by reference.

6. Minus Tides. King County, in coordination with other permitting agencies, will determine whether additional monitoring or regulation of conveyor and barge loading operations are necessary during minus tides, as defined in Exhibit 295 as those tides occurring 4% of the time.

7. Definition of Impacts to Eelgrass. King County, in coordination with other permitting agencies, will develop a definition of "impacts to eelgrass" as that term is used in the Barge Approach and Departure Protocol and Mitigation Plan, based on a percent loss of eelgrass from the North and South eelgrass beds caused by project operations, that will serve as the threshold for responsive actions by Glacier.

8. Lined Barges. Barge decks shall be lined with concrete, wood, asphalt, or other suitable material to minimize noise during barge loading.

9. Protection of Bluff. King County shall require reasonable and necessary agreements, easements, deeds, and/or operational measures to ensure protection of the bluff consistent with Glacier's letter and revised site map submitted to King County on February 25, 2004.

10. Signage. Glacier will provide signage or other appropriate measures to notify the public that public access to the conveyor, barge loading dock, and mine site is prohibited. Glacier is encouraged to continue allowing access to the beach and tidelands under its ownership.

11. Recreation. Glacier is encouraged to develop, in coordination with King County, other local, state, and federal agencies, citizens, and recreation associations and businesses, methods to inform the public of preferred times for recreational opportunity around the site.

DATED this 3rd day of November 2004.

SHORELINES HEARINGS BOARD

BILL CLARKE, Presiding

WILLIAM H. LYNCH, Chair

GORDON CRANDALL

DARCIE NIELSEN

JUDY WILSON